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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,610	06/14/2001	Jay R. Walton	PA010228B1	6396
23696	7590	06/16/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			HA, DAC V	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,610

Applicant(s)

WALTON ET AL.

Examiner

Dac V. Ha

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 38-40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-37 and 41-46 is/are allowed.
- 6) ☒ Claim(s) 1,3-8,11-14,17-19,21 and 27 is/are rejected.
- 7) ☒ Claim(s) 2,9,10,15,16,20 and 22-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/24/02 08/31/01</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 1, 3-5, 7, 8, 21, 28, 41** are rejected under the judicially created doctrine of double patenting over claims 1, 12-14, 19, 25, 28 of U. S. Patent No. 6,751,187 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: the claimed subject matter in the present application is a broader version of that claimed in Patent 6,751,187.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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3. **Claims 2, 6, 9-20, 29-37, 41-46** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of U.S. Patent No. 6,751,187. Although the conflicting claims are not identical, they are not patentably distinct from each other because such claimed subject matter, as claimed, in the present application would have been understood as optional by one skilled in the art based on Patent 6,751,187.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 3-8, 11-14, 17-19, 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over H'mimy et al. (US 6,442,151) (hereafter H'mimy) in view of Olofsson et al. (US 6,167,031) (hereafter Olofsson).

Regarding claim 1, H'mimy discloses the claimed subject matter "determining characteristics of a plurality of transmission channels available for data transmission; segregating the plurality of transmission channels into one or more groups of transmission channels; and for each group of transmission channels, selecting one or more available transmission channels in the group based on the determined characteristics and a threshold" in 2, line 59 to col. 3, line 56; col. 5, lines 39-65.

H'mimy differs from the claimed invention in that H'mimy does not explicitly disclose

“coding and modulating data for all selected transmission channels in the group based on a particular coding and modulation scheme to provide modulation symbols”.

However, such claimed subject matter would have been understood by one skilled in the art since coding and modulating would provide improvement for the transmitted signal. The particular coding and modulating scheme to be used would depend on many factor, including the channel condition. In on example, Olofsson discloses adaptive selection of suitable coding and modulating scheme based upon channel condition (Abstract; col. 4, lines 42-51). Therefore, it would have been obvious to one skilled in the art at the time of the invention to, for example, to incorporate such technique of adaptive selection of suitable coding and modulating scheme, disclosed by Olofsson into H'mimy to optimize, i.e. efficiency of the transmission system.

Regarding claim 21, see claim 1.

Regarding claim 3, the claimed subject matter “wherein the multi-channel communication system is an orthogonal frequency division modulation (OFDM) system and wherein the plurality of available transmission channels correspond to a plurality frequency subchannels” would have been optional to one skilled in the art since Olofsso (i.e. GSM or TDMA) has no restriction of the type of modulation scheme to be used.

Regarding claims 4-6, these claimed subject matter are rather application dependent and would have been obvious to one skilled in the art.

Regarding claim 7, H'mimy further disclose the claimed subject matter “wherein each group is associated with a respective threshold used to select the available transmission channels in the group for use” in col. 3, lines 2-14.

Regarding claim 8, the combination of H'mimy and Olofsson disclose the claimed subject matter "wherein the data for each group is coded and modulated with a respective coding and modulation scheme selected for the group" in H'mimy, col. 3, lines 2-14 and Olofsson, col. 4, lines 41-54.

Regarding claims 11-14, 17-19, 27, these claimed subject matter would have been obvious to one skilled in the art as optional based on the concept disclosed by the combination of H'mimy and Olofsson above.

Allowable Subject Matter

6. Claims 28-37, 41-46 are allowed.

7. Claims 2, 9, 10, 15, 16, 20, 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schaeffer et al. (US 5,210,771) disclose Multiple User Spread-Spectrum Communication System.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 4/4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal line extending from the end of the signature.

Dac V. Ha
Primary Examiner
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